



CASE STUDY.

PROJECT PROFILE:

Opening Drill Cast A514 Mining

The end-user is manufacturing components for the Mining industry made out of Cast A514, with a hardness of 210 Bhn, using a boring mill outfitted with water soluble coolant.

+ CHALLENGE:

Previously the customer was using two different Valenite boring bars running at the following parameters: First operation, 239 RPM, 0.012 IPR, (0.304 mm/rev) which resulted in 2.87 IPM (72.9 mm/min). Second operation, 160 RPM, 0.010 IPR (0.254 mm/rev), which resulted in 1.6 IPM (40.6 mm/min).

The tools combined to drill a 4.90 inches (124.4 mm) diameter thru hole, to a depth 3.90 inches (99.1 mm). The tools had a total cycle time of fifteen minutes. Looking for improvements, the customer wanted to cut down on machine time.

+ OUR SOLUTION:

Allied recommended the Opening Drill, using holder item OP4-1L-SS2.0 and insert OP-05T308-H. The tooling ran at a speed of 311 RPM, .008 IPR (0.203 mm/rev) which resulted in 2.33 IPM (59.18 mm/min). The outcome was excellent as the Opening Drill met the customer's goals of reducing machine time. Because it was accomplished in just one pass, the cycle time dropped from 15 minutes to just 6 minutes and 40 seconds.

+ PROJECT DATA:

Opening Drill helped to reduce the machine run time resulting in the cost per hole dropping from \$35.94 to \$18.92, for an amazing cost savings of over 48%.



INCREASED PRODUCTION EFFICIENCY